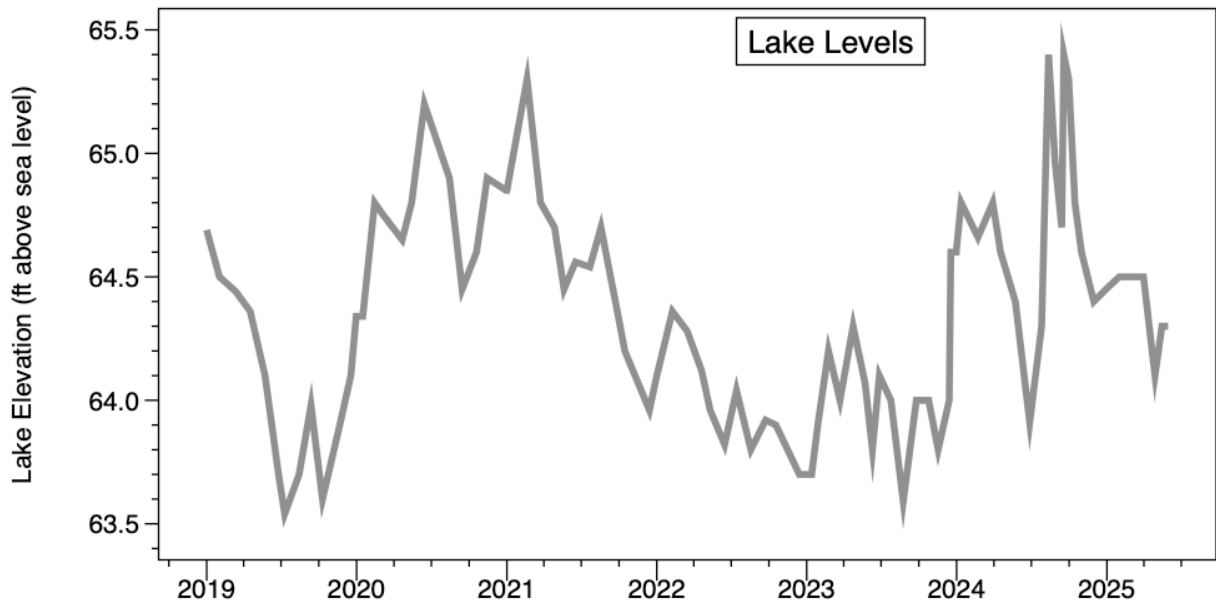
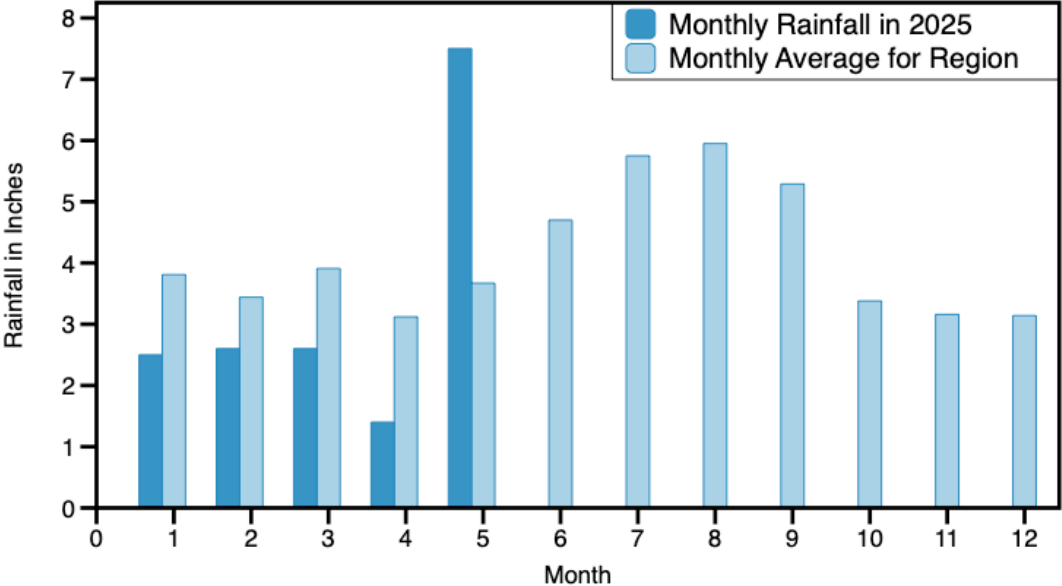


**White Lake Town Board Report**  
**June 2025**

**Diane Lauritsen, Ph.D.**  
**LIMNOSCIENCES**

Rains were more frequent in May, totaling 7.5 for the month, and the lake level increased by 2.5 inches.

**White Lake Monthly Rainfall 2025**



As it has been a while since I shared laboratory results with the board, I am including the three pages that are sent out (along with a chain of custody form that I sign when I send a sample shipment, and the lab person signs when it is received and checked in) after the analysis is complete. This lab does exceptional work, and the second and third page report the quality testing that is done to confirm the results are accurate. This report is from late April sampling.

## RESULTS:



**IEH ANALYTICAL LABORATORIES**  
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<b>CASE FILE NUMBER:</b>	<b>1756629</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>05/16/25</b>	
<b>DATE SAMPLED:</b>	<b>04/28/25</b>	<b>DATE RECEIVED:</b> <b>04/29/25</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM TOWN OF WHITE LAKE</b>		

### CASE NARRATIVE

Six water samples were received by the laboratory in good condition and analyzed according to the chain of custody. No difficulties were encountered in the preparation or analysis of these samples. Sample data follows while QA/QC data is contained on subsequent pages.

### SAMPLE DATA

SAMPLE ID	TOTAL-P (mg/L)	SRP (mg/L)	N03+N02 (mg/L)	AMMONIA (mg/L)	TOTAL-N (mg/L)
WL-C1	0.023	<0.001	0.072	<0.010	0.763
WL-C2	0.025	<0.001	0.058	<0.010	0.777
WL-B1	0.026	<0.001	0.036	<0.010	0.784
WL-B2	0.025	0.003	0.063	<0.010	0.809
WL-A1	0.027	0.004	0.073	<0.010	0.787
WL-A2	0.026	0.003	0.070	<0.010	0.830

SAMPLE ID	TURBIDITY (NTU)	DOC (mg/L)	CHLOR_a (ug/L)	PHAEO_a (ug/L)
WL-C1	3.4	14.9	29	2.4
WL-C2	3.4	16.2		
WL-B1	3.5	15.9	28	4.7
WL-B2	3.5	16.4		
WL-A1	3.5	15.8	23	5.3
WL-A2	3.4	16.9		

In recent years, April has often been the month with the highest phytoplankton productivity (measured in the field with a handheld fluorometer that I use, and in the lab with a big machine that analyzes the filtered material from a sample). My results and the lab results were very close and indicated relatively high productivity. The pH levels that I measured were above 8, indicating a lot of photosynthesis (what plants do with sunlight).

*The reason for the high productivity? High levels of inorganic nitrogen in the lake water—these levels (circled in red) were higher than what I have seen before at White Lake. By comparison, the inorganic nitrogen levels were below detection in February samples (and often are, as this form of nitrogen is used up quickly, and serves to regulate growth). Phosphorus and dissolved organic carbon levels were also higher than what was measured in February (and were similar to levels typically seen in the summer).*

## QUALITY ASSURANCE/QUALITY CONTROL:



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<b>CASE FILE NUMBER:</b>	<b>1756629</b>	<b>PAGE 2</b>
<b>REPORT DATE:</b>	<b>05/16/25</b>	
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### QA/QC DATA

QC PARAMETER	TOTAL-P (mg/L)	SRP (mg/L)	N03+N02 (mg/L)	AMMONIA (mg/L)	TOTAL-N (mg/L)
METHOD	SM20 4500PF	SM20 4500PF	SM204500N03F	SM20 4500NH3H	SM204500NC
DATE ANALYZED	05/03/25	04/30/25	04/30/25	04/30/25	05/06/25
DETECTION LIMIT	0.002	0.001	0.010	0.010	0.050
DUPLICATE					
SAMPLE ID	BATCH	BATCH	BATCH	BATCH	BATCH
ORIGINAL	0.006	0.003	0.236	<0.010	0.380
DUPLICATE	0.005	0.003	0.234	<0.010	0.383
RPD	4.15%	2.91%	0.96%	NC	0.79%
SPIKE SAMPLE					
SAMPLE ID	BATCH	BATCH	BATCH	BATCH	BATCH
ORIGINAL	0.006	0.003	0.236	<0.010	0.380
SPIKED SAMPLE	0.055	0.023	0.422	0.185	1.43
SPIKE ADDED	0.050	0.020	0.200	0.200	1.00
% RECOVERY	98.55%	99.96%	92.84%	92.26%	104.50%
QC CHECK					
FOUND	0.094	0.040	0.411	0.347	0.479
TRUE	0.094	0.039	0.408	0.324	0.469
% RECOVERY	100.00%	102.56%	100.85%	107.24%	102.13%
BLANK	<0.002	<0.001	<0.010	<0.010	<0.050

RPD = RELATIVE PERCENT DIFFERENCE.

NA = NOT APPLICABLE OR NOT AVAILABLE.

NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.

OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

# MORE QA/QC:



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<b>CASE FILE NUMBER:</b>	<b>1756629</b>	<b>PAGE 3</b>
<b>REPORT DATE:</b>	<b>05/16/25</b>	
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## QA/QC DATA

QC PARAMETER	TURBIDITY (NTU)	DOC (mg/L)	CHLOR_a (ug/L)	PHAEO_a (ug/L)
METHOD	SM20 2130B	EPA 415.1	SM2010200H	SM2010200H
DATE ANALYZED	04/30/25	05/05/25	05/09/25	05/09/25
DETECTION LIMIT	0.10	0.250	0.1	0.1
DUPLICATE				
SAMPLE ID	WL-A2	BATCH	BATCH	BATCH
ORIGINAL	3.4	<0.250	23	5.3
DUPLICATE	3.5	<0.250	24	5.9
RPD	2.90%	NC	5.71%	9.52%
SPIKE SAMPLE				
SAMPLE ID		BATCH		
ORIGINAL		<0.250		
SPIKED SAMPLE		4.67		
SPIKE ADDED		4.50		
% RECOVERY	NA	103.67%	NA	NA
QC CHECK				
FOUND	8.0	3.85		
TRUE	8.0	4.00		
% RECOVERY	100.00%	96.25%	NA	NA
BLANK	NA	<0.250	NA	NA

RPD = RELATIVE PERCENT DIFFERENCE.  
 NA = NOT APPLICABLE OR NOT AVAILABLE.  
 NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.  
 OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

SUBMITTED BY:

*Damien Gadomski*

Damien Gadomski, PhD  
 Laboratory Manager

I also ship water samples to a scientist who counts, measures, and identifies phytoplankton. I asked her to take a quick look at an April sample to see what was dominating the population, and it was a desmid—this group of algae is almost always the most abundant in White Lake, with a wide variety of different species. This group seems to be very responsive to inputs of inorganic nitrogen to the lake, and once it is used up, their numbers drop dramatically.

Also included this month is the White Lake 2024 Annual Report, the latest in a series, all of which are available at the White Lake Watch web site. It serves as a contrast to the data described above, as last year the phytoplankton productivity levels were lower, and the highest pH level measured was only 7.

The lake is full of life, much of which is as special as what is found in Lake Waccamaw, but it comes and goes, regulated by temperature, rainfall, nutrients, and sunlight.

Also included with this board report is a copy of a 50-year-old report by NC Wildlife Resources Commission on the aquatic vegetation and associated lake life that was found at that time. The lake bottom has always been a productive region, and the same things that were found then are still found now, although lake bottom life comes and goes just as the life found in the water column.